#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 99.28

## WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-017642 Address: 333 Burma Road **Date Inspected:** 26-Oct-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC) **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes No Li Yang and Zhu Zhong Hai **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: OBG** Trial Assembly

#### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 11BE to Segment 11CE (Root Gap and Offset)

This QA Inspector performed Dimension Control Inspection on Oct 22, 2010 and Oct 26, 2010 for measuring root gap and offset on at the Transverse Splice for the Segment 11BE to Segment 11CE between Panel Point (PP) 100 to PP 101 at the following locations:

Work Point E2 towards Work Point E1 (Edge Panel Bike Path Side).

Work Point E1 towards Work Point E3 (Side Panel Bike Path Side).

Work Point E3 towards Work Point E4 (Bottom Panel).

Work Point E4 towards Work Point E6 (Side Panel Cross Beam Side).

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Work Point E6 towards Work Point E5 (Edge Panel Cross Beam Side).

Work Point E5 towards Work Point E2 (Deck Panel).

The QA Inspector measured the root gap using 1(One) taper gauge and measured the offset using a bridge cam gauge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 11BW to Segment 11CW (Root Gap and Offset)

This QA Inspector performed Dimension Control Inspection on Oct 22, 2010 and Oct 26, 2010 for measuring root gap and offset at the Transverse Splice for the Segment 11BW to Segment 11CW between Panel Point (PP) 100 to PP 101 at the following locations:

Work Point W5 towards Work Point W6 (Edge Panel Cross Beam Side).

Work Point W6 towards Work Point W4 (Side Panel Cross Beam Side).

Work Point W4 towards Work Point W3 (Bottom Panel).

Work Point W3 towards Work Point W1 (Side Panel Counter Weight Side).

Work Point W1 towards Work Point W2 (Edge Panel Counter Weight Side).

Work Point W2 towards Work Point W5 (Deck Panel).

The QA Inspector measured the root gap using 1(One) taper gauge and measured the offset using a bridge cam gauge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Cross Beam (CB) 13

This QA Inspector performed Dimension Control Inspection for measuring offset for the Cross Beam (CB) 13 stiffeners to Segment 10AE and Segment 10AW FL3 stiffeners. The majority of inspection was performed on October 06, 2010, as on date i.e., October 26, 2010 gap measurements was performed along with Caltrans QA Inspector Mr. Manikandan between the skin plate of Cross Beam to the Segment 10AE FL3 and Segment 10AW FL3.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

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Cross Beam (CB) 14

This QA Inspector performed Dimension Control Inspection for measuring offset for the Cross Beam (CB) 14 stiffeners to Segment 10CE and Segment 10CW FL3 stiffeners. The majority of inspection was performed on October 04, 2010, as on date i.e., October 26, 2010 gap measurements was performed along with Caltrans QA Inspector Mr. Manikandan between the skin plate of Cross Beam to the Segment 10CE FL3 and Segment 10CW FL3.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Bike Path at Bay # 19

This QA Inspector performed Dimension Control Inspection on the Bike Path bottom panel for flatness check for bike path after heat straightening and bike path is identified as following.

BK004A-005 dimension measured and recorded within tolerance.

BK006A-002 dimension measured and recorded within tolerance.

The QA Inspector measured the flatness using 1500mm long straight edge.

The results of the inspection were informed to Caltrans Lead Inspector Mr. Artur Peterson and ABF Mr. Peter Shaw.

Segment 11BW to Segment 11CW

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW11B-008. The welder identification was 046709 and 040656 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the Bottom Panel, transverse splice weld.

Please reference the pictures attached for more comprehensive details.

Segment 11AW to Segment 11BW

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW11B-009. The welder identification was 057333 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the Side Panel, transverse splice Cross Beam side.

Please reference the pictures attached for more comprehensive details.

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Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.





## **Summary of Conversations:**

No relevant conversations were reported on this date.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math, Manjunath	Quality Assurance Inspector
Reviewed By:	Dsouza, Christopher	QA Reviewer